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## Swiss-Prot: PAG\_BACAN (P13423)

Protective antigen precursor (PA) (PA-83) (PA83) (Anthrax toxintranslocating protein) [Contains: PA-20 (PA20); PA-63 (PA63)].

Bacillus anthracis.

### Feature Table:

FT	SIGNAL	<u>1</u>	<u>29</u>	
FT	CHAIN	<u>30</u>	<u>764</u>	PROTECTIVE ANTIGEN.
FT	CHAIN	<u>30</u>	<u>196</u>	PROTECTIVE ANTIGEN, PA-20.
FT	CHAIN	<u>197</u>	<u>764</u>	PROTECTIVE ANTIGEN, PA-63.
FT	DOMAIN	<u>30</u>	<u>287</u>	DOMAIN 1, CALCIUM-BINDING; LF AND EF
FT				BINDING SITES.
FT	DOMAIN	<u>288</u>	<u>516</u>	DOMAIN 2, MEMBRANE INSERTION AND
FT				HEPTAMERIZATION.
FT	DOMAIN	<u>517</u>	<u>624</u>	DOMAIN 3, HEPTAMERIZATION.
FT	DOMAIN	<u>625</u>	<u>764</u>	DOMAIN 4, BINDING TO THE RECEPTOR.
FT	METAL	<u>206</u>	<u>206</u>	CALCIUM.
FT	METAL	<u>208</u>	<u>208</u>	CALCIUM.
FT	METAL	<u>210</u>	<u>210</u>	CALCIUM.
FT	METAL	<u>217</u>	<u>217</u>	CALCIUM.
FT	SITE	<u>196</u>	<u>197</u>	CLEAVAGE (BY FURIN).
FT	SITE	<u>343</u>	<u>344</u>	CLEAVAGE (BY CHYMOTRYPSIN); REQUIRED FOR
FT				TRANSLOCATION OF LF AND EF.
FT	VARIANT	<u>560</u>	<u>560</u>	F -> L (IN SVERDLOVSK SAMPLE).
FT	VARIANT	<u>565</u>	<u>565</u>	P -> S (IN STRAIN BA1024).
FT	VARIANT	<u>600</u>	<u>600</u>	A -> V (IN STRAINS BA1024 AND V770-NP1-
FT				R).
FT	MUTAGEN	<u>213</u>	<u>213</u>	P->A: DECREASE IN THE ABILITY TO BIND TO
FT				LF AND PARTIALLY TOXIC AT HIGH
FT				CONCENTRATIONS.
FT	MUTAGEN	<u>216</u>	<u>216</u>	L->A: DECREASE IN THE ABILITY TO BIND TO
FT				LF AND PARTIALLY TOXIC AT HIGH
FT				CONCENTRATIONS.
FT	MUTAGEN	<u>231</u>	<u>231</u>	F->A: LOSS OF ABILITY TO BIND TO LF AND
FT				COMPLETELY NONTOXIC.
FT	MUTAGEN	<u>232</u>	<u>232</u>	L->A: LOSS OF ABILITY TO BIND TO LF AND
FT				COMPLETELY NONTOXIC.
FT	MUTAGEN	<u>234</u>	<u>234</u>	P->A: LOSS OF ABILITY TO BIND TO LF AND
FT				COMPLETELY NONTOXIC.
FT	MUTAGEN	<u>236</u>	<u>236</u>	I->A: LOSS OF ABILITY TO BIND TO LF AND
FT				COMPLETELY NONTOXIC.
FT	MUTAGEN	<u>239</u>	<u>239</u>	I->A: DECREASE IN THE ABILITY TO BIND TO
FT				LF AND PARTIALLY TOXIC AT HIGH
FT				CONCENTRATIONS.
FT	MUTAGEN	<u>255</u>	<u>255</u>	W->A: NO EFFECT ON LF-BINDING ABILITY AND
FT				AS TOXIC AS THE WILD-TYPE.

FT	MUTAGEN	265	265
FT			
FT	MUTAGEN	289	289
FT			
FT			
FT	MUTAGEN	342	342
FT			
FT	MUTAGEN	342	344
FT			
FT	MUTAGEN	342	343
FT			
FT	MUTAGEN	344	344
FT			
FT	MUTAGEN	375	375
FT			
FT			
FT	MUTAGEN	379	379
FT	MUTAGEN	381	381
FT			
FT			
FT	MUTAGEN	426	426
FT			
FT			
FT	MUTAGEN	454	454
FT			
FT			
FT	MUTAGEN	456	456
FT			
FT			
FT	MUTAGEN	512	512
FT	MUTAGEN	541	541
FT	MUTAGEN	543	543
FT			
FT	MUTAGEN	581	581
FT			
FT	MUTAGEN	583	583
FT			
FT	MUTAGEN	591	591
FT			
FT	MUTAGEN	595	595
FT			
FT	MUTAGEN	603	603
FT			
FT	MUTAGEN	621	621
FT	CONFLICT	314	314
FT	STRAND	49	53
FT	TURN	56	57
FT	STRAND	61	66
FT	STRAND	71	71
FT	STRAND	74	74
FT	HELIX	76	78
FT	TURN	80	81
FT	HELIX	84	87
FT	STRAND	91	99
FT	STRAND	104	110
FT	TURN	111	112
FT	HELIX	113	115
FT	STRAND	116	120
FT	TURN	121	122
FT	STRAND	123	126
FT	STRAND	135	137
FT	TURN	139	140
FT	STRAND	142	150
FT	STRAND	159	159

F->A: NO EFFECT ON LF-BINDING ABILITY AND AS TOXIC AS THE WILD-TYPE.  
P->A: REDUCED TOXICITY IN COMBINATION WITH LETHAL FACTOR; DECREASED MEMBRANE INSERTION AND TRANSLOCATION OF THE LETHAL FACTOR.  
F->C: LOSS OF TOXICITY PROBABLY DUE TO LOSS OF CAPABILITY TO TRANSLOCATE LF.  
FFD->AAA: DECREASE IN TOXICITY PROBABLY DUE TO SLOW TRANSLOCATION OF LF.  
MISSING: LOSS OF TOXICITY PROBABLY DUE TO LOSS OF CAPABILITY TO TRANSLOCATE LF.  
D->A: DECREASE IN TOXICITY PROBABLY DUE TO SLOW TRANSLOCATION OF LF.  
W->A: LOSS OF TOXICITY PROBABLY DUE TO FAULTY MEMBRANE INSERTION OR TRANSLOCATION OF LF/EF INTO THE CYTOSOL.  
M->A: NO EFFECT.  
L->A: LOSS OF TOXICITY PROBABLY DUE TO FAULTY MEMBRANE INSERTION OR TRANSLOCATION OF LF/EF INTO THE CYTOSOL.  
K->A: LOSS OF CAPABILITY TO UNDERGO CONFORMATIONAL CHANGES THAT LEAD TO PORE FORMATION AND TRANSLOCATION.  
D->A: LOSS OF CAPABILITY TO UNDERGO CONFORMATIONAL CHANGES THAT LEAD TO PORE FORMATION AND TRANSLOCATION.  
F->A: LOSS OF CAPABILITY TO UNDERGO CONFORMATIONAL CHANGES THAT LEAD TO PORE FORMATION AND TRANSLOCATION.  
Q->A: LOSS OF HEPTAMERIZATION CAPABILITY.  
D->A: LOSS OF HEPTAMERIZATION CAPABILITY.  
L->A: DECREASE IN HEPTAMERIZATION CAPABILITY.  
F->A: LOSS OF TOXICITY DUE TO DEFECTIVE OLIGOMERIZATION.  
F->A: DECREASE IN TOXICITY DUE TO DEFECTIVE OLIGOMERIZATION.  
I->A: LOSS OF TOXICITY DUE TO DEFECTIVE OLIGOMERIZATION.  
L->A: LOSS OF TOXICITY DUE TO DEFECTIVE OLIGOMERIZATION.  
I->A: LOSS OF TOXICITY DUE TO DEFECTIVE OLIGOMERIZATION.  
R->A: NO EFFECT.  
Q -> E (IN REF. 1).

FT	STRAND	162	166
FT	STRAND	172	174
FT	TURN	177	179
FT	STRAND	180	181
FT	TURN	207	208
FT	HELIX	214	219
FT	STRAND	221	225
FT	STRAND	230	234
FT	HELIX	237	241
FT	TURN	242	244
FT	STRAND	248	248
FT	TURN	252	253
FT	TURN	257	258
FT	HELIX	264	269
FT	TURN	270	270
FT	TURN	274	275
FT	HELIX	278	281
FT	TURN	283	284
FT	STRAND	285	285
FT	STRAND	291	302
FT	STRAND	318	326
FT	STRAND	331	331
FT	STRAND	350	350
FT	STRAND	357	363
FT	TURN	383	384
FT	STRAND	387	397
FT	STRAND	403	403
FT	STRAND	410	414
FT	TURN	415	417
FT	STRAND	418	423
FT	TURN	427	428
FT	STRAND	434	434
FT	TURN	436	437
FT	STRAND	438	440
FT	TURN	443	444
FT	STRAND	448	449
FT	TURN	456	457
FT	STRAND	461	463
FT	HELIX	465	474
FT	STRAND	476	481
FT	STRAND	487	492
FT	TURN	493	496
FT	STRAND	497	505
FT	HELIX	506	516
FT	STRAND	517	522
FT	TURN	524	526
FT	STRAND	530	535
FT	STRAND	537	537
FT	STRAND	551	551
FT	HELIX	552	560
FT	STRAND	563	563
FT	TURN	565	566
FT	STRAND	570	571
FT	TURN	572	573
FT	STRAND	574	575
FT	HELIX	576	578
FT	STRAND	579	583
FT	HELIX	585	598
FT	TURN	599	599
FT	TURN	603	603
FT	HELIX	604	609
FT	STRAND	611	611
FT	STRAND	613	613
FT	TURN	614	615
FT	STRAND	617	622

FT	TURN	623	624
FT	STRAND	626	627
FT	TURN	629	630
FT	STRAND	633	635
FT	HELIX	638	643
FT	TURN	644	645
FT	STRAND	648	651
FT	STRAND	655	658
FT	HELIX	662	666
FT	TURN	667	667
FT	STRAND	668	676
FT	TURN	678	679
FT	STRAND	682	684
FT	TURN	685	686
FT	TURN	689	690
FT	STRAND	695	697
FT	TURN	699	700
FT	STRAND	703	706
FT	TURN	709	713
FT	TURN	721	722
FT	STRAND	724	731
FT	HELIX	732	734
FT	TURN	748	749
FT	STRAND	753	759
FT	HELIX	760	764

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For reference to the SEView applet, see [In Silico Biology, Vol. 1 \(1998\)](#).

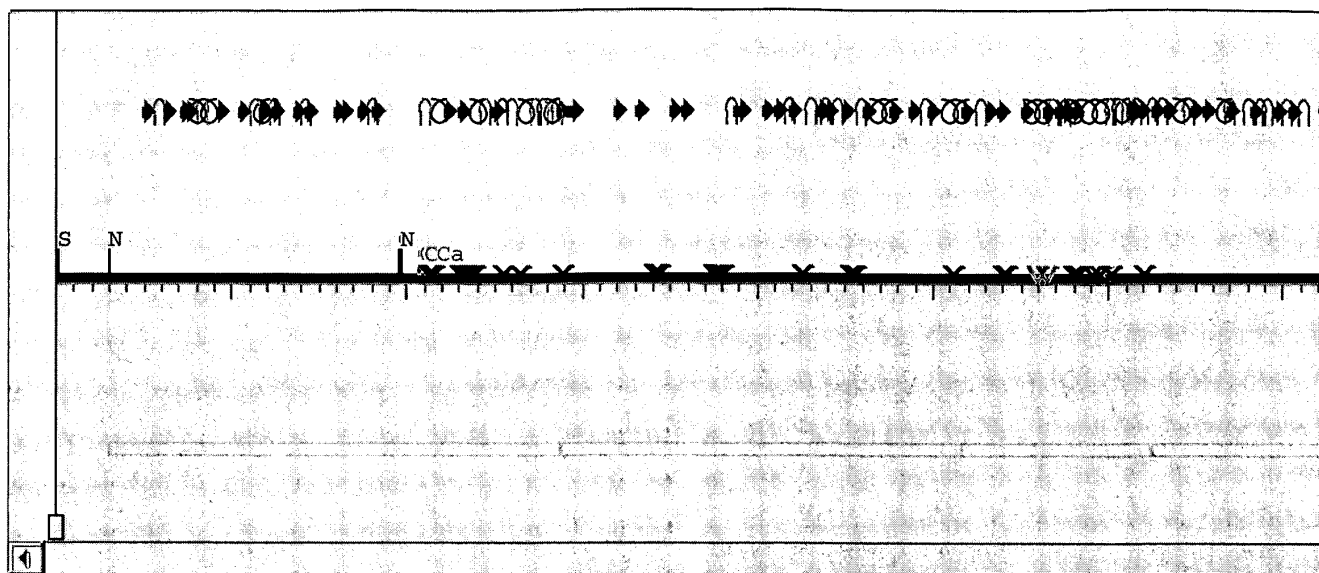
Click [here](#) for a description of represented protein features.

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**Note to Mac users:** There seems to be a bug in many versions (4.x) of Netscape Communicator that causes SEView to fail. We're sorry about this but there is nothing we can do. Please try with Explorer or upgrade your version of Netscape.

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Click on items to see a description. Drag the two red cursors to select a zoom region.

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